What is claimed is:

1. A feedblock for making a multilayer optical film, comprising:

(a) a gradient plate comprising at least first and second flow channels, wherein at least one of said flow channel has a cross-sectional area that changes from a first position to a second position along said flow channel;

(b) a feeder tube plate having a first plurality of conduits in fluid communication with said first flow channel and a second plurality of conduits in fluid communication with said second flow channel, each conduit feeding its own respective slot die, each conduit having a first end and a second end and, said first end of said conduits being in fluid communication with said flow channels, and said second end of said conduits being in fluid communication with said slot die; and

(c) an axial rod heater located proximal to said conduits.

2. The feedblock of claim 1, wherein said axial rod heater lies in between said first plurality of conduits and said second plurality of conduits.

3. The feedblock of claim 1, wherein said axial rod heater is capable of providing along its length a multiplicity of discreet controllable temperature zones.

4. The feedblock of claim 1, wherein said slot die comprises an expansion section located in said feeder tube plate and a slot section located in a slot plate.

5. The feedblock of claim 1, further comprising a compression section in fluid communication with said slot die.

6. A feedblock for making a multilayer optical film, comprising:

(a) a gradient plate comprising at least first and second flow channels, wherein at least one of said flow channels has a cross-sectional area that changes from a first position to a second position along said flow channel;

(b) a feeder tube plate comprising a first plurality of conduits in fluid communication with said first flow channel and a second plurality of conduits in

fluid communication with said second flow channel, each conduit feeding its own respective slot die, each conduit having a first end and a second end and, said first end of said conduits being in fluid communication with said flow channels and said second end of said conduits being in fluid communication with said slot die; and

(c) a manifold plate comprising at least first and second supplemental channels having top and bottom portions, said top portion being bounded by said manifold plate, said bottom portion being bounded in said gradient plate and lying opposite of said flow channels.

7. The feedblock of claim 6, further comprising an axial rod heater lying in between said first plurality of conduits and said second plurality of conduits.

8. The feedblock of claim 7, wherein said axial rod heater is capable of providing along its length a multiplicity of discreet controllable temperature zones.

9. The feedblock of claim 6, wherein said slot die comprises an expansion section located in said feeder tube plate and a slot section located in a slot plate.

10. The feedblock of claim 6, further comprising a compression section in fluid communication with said slot die.

11. A feedblock for making a multilayer optical film, comprising:

(a) a housing having external surfaces;

(b) a gradient plate inside said housing, said gradient plate comprising at least first and second flow channels, wherein at least one of said flow channels has a cross-sectional area that changes from a first position to a second position along said flow channel;

(c) a feeder tube plate comprising a first plurality of conduits in fluid communication with said first flow channel and a second plurality of conduits in fluid communication with said second flow channel, each conduit feeding its own respective slot die, each conduit having a first end and a second end, said first end

of said conduits being in fluid communication with said flow channels and said second end of said conduits being in fluid communication with said slot die; and

(d) heaters attached to said external surface of said housing.

12. The feedblock of claim 11, further comprising an axial rod heater lying in between said first plurality of conduits and said second plurality of conduits.

13. The feedblock of claim 12, wherein said axial rod heater is capable of providing along its length a multiplicity of discreet controllable temperature zones.

14. The feedblock of claim 11, wherein said slot die comprises an expansion section located in said feeder tube plate and a slot section located in a slot plate.

15. The feedblock of claim 11, further comprising a compression section in fluid communication with said slot die.